

POSITIONS AND AREAS OF SUN SPOTS—Continued

[Communicated by Capt. J. F. Hellweg, U. S. Navy (Ret.), Superintendent U. S. Naval Observatory. Data furnished by the U. S. Naval Observatory in cooperation with Harvard and Mount Wilson Observatories. The difference in longitude is measured from the central meridian, positive west. The north latitude is positive. Areas are corrected for foreshortening and are expressed in millionths of the sun's visible hemisphere. The total area for each day includes spots and groups]

Date	East- ern stand- ard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longi- tude	Longi- tude	Lat- tude	Spot	Group		
1936								
Oct. 14.....	h. m.	°	°	°				U. S. Naval.
	11 26	-52.0	132.4	-18.5		93		
		-32.0	152.4	-19.5		247		
		+11.0	195.4	-15.5		216		
		+32.5	216.9	+18.0		154		
		+36.0	220.4	-20.0	31			
		+40.0	224.4	-14.0	278		1,019	
Oct. 15.....	11 45	-52.0	119.0	-12.0		66		Mt. Wilson.
		-37.0	134.0	-19.0		147		
		-17.0	154.0	-20.0		244		
		-14.0	157.0	+13.0		38		
		+26.0	197.0	-16.0		269		
		+45.0	216.0	+19.0		84		
		+50.0	221.0	-20.0		23		
		+53.0	224.0	-14.0	279		1,090	
Oct. 17.....	11 27	-74.0	70.9	+22.0		77		U. S. Naval.
		-69.0	75.9	+12.0		93		
		-22.0	122.9	-11.5		62		
		-15.0	129.9	-19.0		62		
		-8.0	136.9	-17.0	46			
		+9.0	153.9	-19.5		108		
		+16.5	161.4	+12.0	15			
		+61.0	195.9	-15.0		77		
		+82.0	226.9	-13.5	154		694	
Oct. 18.....	11 15	-66.0	75.9	+21.0		70		Harvard.
		-8.5	125.4	-12.5		64		
		+8.0	139.9	-17.0	79			
		+26.5	153.4	-18.0		235		
		+32.5	164.4	+12.0	30			
		+68.0	199.9	-14.5		139	617	
Oct. 19.....	11 15	-46.0	72.6	+21.5		62		U. S. Naval.
		+4.0	122.6	-12.0		93		
		+20.0	138.6	-19.5	39			
		+37.5	156.1	-20.0	93			
		+44.0	162.6	+10.5	31		318	
Oct. 20.....	11 10	-32.0	73.4	+21.0		46		Do.
		+17.0	122.4	-11.5		93		
		+34.5	139.9	-19.5		77		
		+50.0	155.4	-20.0	62		278	
Oct. 21.....	11 5	-75.0	17.3	+17.0		216		Do.
		-20.0	72.3	+21.0		46		
		+31.0	123.3	-11.0		77		
		+47.0	139.3	-19.5		154		
		+64.0	156.3	-20.0	46		539	
Oct. 22.....	11 11	-61.0	18.0	+17.0		247		Do.
		-7.0	72.0	+21.0		31		
		+45.0	124.0	-11.0		77		
		+62.0	141.0	-19.5		31		
		+79.0	158.0	-20.0	31		417	
Oct. 23.....	11 45	-44.0	21.5	+16.0		288		Mt. Wilson.
		-4.0	61.5	-26.0		29		
		+8.0	73.5	+22.5	5			
		+38.0	103.5	+19.0	21			
		+64.0	129.5	-12.0		20		
		+79.0	144.5	-19.0		15	378	
Oct. 24.....	11 38	-40.0	12.4	+17.5		62		U. S. Naval.
		-31.0	21.4	+16.0		154	216	
Oct. 25.....	12 48	-27.0	11.6	+17.5		46		Do.
		-18.0	20.6	+16.0		185	231	
Oct. 26.....	10 50	-85.0	301.5	+20.0	256			Mt. Wilson.
		-85.0	301.5	-25.0	21			
		-9.0	17.5	-14.0		207		
		-6.0	20.5	+17.0		235		
		+9.0	35.5	-25.0		10		
		+35.0	61.5	-23.0		2		
		+72.0	98.5	+19.5		14	745	
Oct. 27.....	11 12	-70.0	303.1	+20.0	123			U. S. Naval.
		-1.0	12.1	+17.0		31		
		+7.0	20.1	-16.0		77		
		+9.0	22.1	+16.0		123	354	

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Date	East- ern stand- ard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longi- tude	Longi- tude	Lat- tude	Spot	Group		
1936								
Oct. 28.....	h. m.	°	°	°				U. S. Naval.
	11 8	-69.0	290.9	-20.0	46			
		-58.0	301.9	+19.5		247		
		-54.0	305.9	-25.0	31			
		+20.0	19.9	-16.0		46		
		+21.0	20.9	+16.0		123		
		+38.0	37.9	-25.0	15		508	
Oct. 29.....	11 17	-55.0	291.7	-20.0	62			Do.
		-45.0	301.7	+19.5		309		
		-40.0	306.7	-22.5	31			
		+35.0	21.7	+16.0	185			
		+48.0	34.7	-16.0	15			
		+51.0	37.7	-24.5	15		617	
Oct. 30.....	13 19	-65.0	267.4	-17.0		123		Do.
		-60.0	272.4	+20.0		46		
		-40.5	291.9	-20.5	39			
		-30.0	302.4	+19.0		216		
		-28.0	304.4	-25.0	15			
		+50.0	22.4	+15.0	93		532	
Oct. 31.....	11 19	-70.0	250.3	-17.0		62		Do.
		-53.0	267.3	-17.0		185		
		-47.0	273.3	+20.0		93		
		-39.0	291.3	-21.0	46			
		-20.0	300.3	+19.5		185		
		-16.0	304.3	-25.0	15		694	
		+62.0	22.3	+15.0		77		

Mean daily area for 30 days, \$39.

PROVISIONAL SUN-SPOT RELATIVE NUMBERS, OCTOBER 1936

[Data dependent alone on observations at Zurich and its station at Arosa]

[Furnished through the courtesy of Prof. W. Brunner, Eidgen, Sternwarte, Zurich Switzerland]

October 1936	Relative numbers	October 1936	Relative numbers	October 1936	Relative numbers
1.....	113	11.....	ad --	21.....	d 65
2.....	Ec 98	12.....	Mac 82	22.....	55
3.....	Wac 103	13.....	a 76	23.....	63
4.....	112	14.....	92	24.....	52
5.....	122	15.....	WMcc123	25.....	35
6.....	bd 129	16.....	ad 90	26.....	Mc 40
7.....	Ec --	17.....	105	27.....	aad 52
8.....	--	18.....	a 82	28.....	77
9.....	107	19.....	a 80	29.....	d --
10.....	81	20.....	85	30.....	95
				31.....	d 95

Mean, 27 days=85.5.

a= Passage of an average-sized group through the central meridian.
b= Passage of a large group or spot through the central meridian.
c= New formation of a center of activity: E. on the eastern part of the sun's disk; W. on the western part; M. in the central circle zone.
d= Entrance of a large or average-sized center of activity on the east limb.